

**In the claims:**

1-7. (canceled).

8. (currently amended): A recombinant protein derived from a blood-feeding arthropod ectoparasite ~~that inhibits tryptase~~, or an active fragment of said protein ~~that: or a functional equivalent of said protein~~

- i) inhibits tryptase with a  $K_i$  of less than  $1 \times 10^{-6}$  M; and
- ii) exhibits significant sequence homology with the tick-derived protease inhibitor protein (TdPI) sequence set forth in SEQ ID NO: 2 or an active fragment of said protein.

wherein said sequence homology is defined as 80% or more of the amino acids in the sequence being completely conserved as identical residues if the protein is aligned with the sequence of SEQ ID NO:2, the alignments being obtained using GCG's bestfit command (gap creation penalty = 2.5; gap extension penalty = 0.5).

9. (currently amended): A recombinant protein[~~;~~] ~~or protein fragment or functional equivalent~~ according to claim 8, that functions as an inhibitor of ~~tryptase~~, ~~preferably of human mast cell~~ tryptase.

10-15. (canceled).

16. (currently amended): A recombinant protein[~~;~~] ~~or protein fragment or functional equivalent~~ according to ~~either of claims 1 or~~ claim 8 that has been genetically or chemically fused to one or more peptides or polypeptides.

17. (currently amended): A recombinant protein[~~;~~] ~~or protein fragment or functional equivalent~~ according to ~~either of claims 1 or~~ claim 8 that is bound to a support, such as a resin.

18-43. (canceled).

44. (currently amended): A recombinant protein or protein fragment according to claim 8 [40] comprising the TdPI sequence set forth in SEQ ID NO:2.

45. (currently amended): A recombinant protein or protein fragment according to claim 8 that inhibits tryptase with a  $K_i$  of ~~less than  $1 \times 10^{-6}$  M, preferably less than  $1 \times 10^{-7}$  M, more preferably less than  $2 \times 10^{-8}$  M, most~~ most preferably less than  $1 \times 10^{-9}$  M.

46. (currently amended): A recombinant protein[;] or protein fragment ~~or functional equivalent~~ according to claim 8 that inhibits catalytic tryptase activity.

47. (currently amended): A recombinant protein[;] or protein fragment ~~or functional equivalent~~ according to claim 8 which inhibits mast cell tryptase, preferably human mast cell tryptase.

48. (currently amended): A recombinant protein[;] or protein fragment ~~or functional equivalent~~ according to claim 8[;] that is derived from a tick.

49. (currently amended): A recombinant protein[;] or protein fragment ~~or functional equivalent~~ according to claim 48[;] that is derived from the tick *Rhipicephalus appendiculatus*.

50. (currently amended): An anti-tryptase agent comprising a recombinant protein[;] or protein fragment ~~or functional equivalent~~ according to claim 8.

51. (canceled).

52. (new): A recombinant protein comprising SEQ ID NO: 2 or a protein fragment thereof that inhibits tryptase with a  $K_i$  of less than  $1 \times 10^{-6}$  M.

53. (new): A recombinant protein comprising an amino acid sequence, wherein 90% or more of the amino acid sequences of the recombinant protein are identical to amino acid sequences of SEQ ID NO: 2 as determined by sequence alignment using GCG's bestfit command (gap creation penalty = 2.5; gap extension penalty = 0.5) and wherein said recombinant protein inhibits tryptase with a  $K_i$  of less than  $1 \times 10^{-6}$  M.

54. (new): A recombinant protein comprising an amino acid sequence, wherein 95% or more of the amino acid sequences of the recombinant protein are identical to amino acid sequences of SEQ ID NO: 2 as determined by sequence alignment using GCG's bestfit command (gap creation penalty = 2.5; gap extension penalty = 0.5) and wherein said recombinant protein inhibits tryptase with a  $K_i$  of less than  $1 \times 10^{-6}$  M.